

What is claimed is

1. A protective wall (1) for shielding against laser beams, in particular those stemming from welding machines, wherein the protective wall (1) contains light-alloy shaped sections (10 - 13) that are essentially rectangular and incorporates chambers that are formed by interior walls (2), and profilings that are formed on the front and/or side, characterized in that the light-alloy shaped sections (10 - 14) are lined up and connected side wall to side wall in an individually removable manner to form the protective wall (20, 22; 21, 23; 24, 25) in such a way that the profiling on the side is implemented step-like from a front wall (26) to a back wall (27).
2. A protective wall according to claim 1, characterized in that the profiling on the side walls (20 - 25) is implemented in each case behind hook-shaped strip projections (40A - 43A) matching the same, parallel in each case to the side-wall grooves (40 - 43) into which the strip projections (50 - 53) of the adjoining side wall (22, 23) engage in each case, and that the strip projections (40A, 41A; 42A, 43A) with the respective associated groove (50 - 53) are implemented laterally offset relative to one another on each side wall (20, 21) in a step-like manner from the front wall (26) to the back wall (27) so that on the individual shaped sections (10 - 14) front strip projections (40A, 42) are located alternately closer to one another than those on the back, and vice versa.
3. A protective wall according to claim 1 or 2, characterized in that the given hook-shaped strip projections (41A, 43A) that are spaced further apart extend flush into the front or back wall (26, 27) and that the given more closely spaced strip projections (40A, 42A) are extensions of the side wall (20, 21) or formed integral with the side wall (22, 23) as hook-shaped strip projections (51, 53).

4. A protective wall according to claim 3, characterized in that the given more closely spaced strip projections (40A, 42A; 51, 53) end recessed relative to the front or back wall (26, 27) by one material thickness (M), so that a flush front and back wall is created in each case.
5. A protective wall according to any of the above claims, characterized in that the shaped sections (10 - 14) have different widths (B1, B2), each of which are whole-number multiples of one base width (B2).
6. A protective wall according to claim 5, characterized in that it has a wall thickness (WD) that corresponds to two base widths (B2).
7. A protective wall according to any of the above claims, characterized in that the shaped section (15) is a corner shaped section, incorporating in each case a rectangular front and back wall and its side walls (25) are positioned at a right angle to one another.
8. A protective wall according to any of the above claims, characterized in that the undercut grooves (31, 33, 35) on the side are disposed centrally on the side walls (20, 21, 23) in each case and their width is suitable in each case for a multi-layered laser protective wall plate.
9. A protective wall according to any of the above claims, characterized in that the undercut grooves (30, 32) on the front extend closely adjacent in each case to the grooves (40, 42) that receive the strip projections (50, 52).
10. A protective wall according to claim 9, characterized in that the undercut grooves (32, 34) on the front of adjoining shaped sections (11, 12; 13, 14) have a center distance (A) that corresponds to the base width (B2).

11. A protective wall according to claim 9 or 10, characterized in that the undercut grooves (30, 32, 34) on the front are suitable in their width in each case to receive a multi-layered laser protective wall plate.
12. A protective wall according to any of claims 9 through 11, characterized in that the rear grooves 30 - 34 on the front are implemented on the corner shaped section (15), and its angled front wall areas each have a width across the corner (E) that corresponds to the base width (B2).
13. A protective wall according to any of claims 5 - 12, characterized in that the base width 30 - 50 is 40 mm in particular
14. A protective wall according to any of claims 9 - 13, characterized in that, in the rear grooves (30 - 34) on the front, finishing plates (60) are held by means of spring elements (61, 62) formed integrally thereon.
15. A protective wall according to claim 14, characterized in that the finishing plates (60) have a profiling (63) on the front.
16. A protective wall according to claim 14 or 15, characterized in that the finishing plates (60) extend from shaped section (11) to shaped section (12).
17. A protective wall according to any of the above claims, characterized in that the shaped sections (10 - 15) and/or the finishing plates (60) are extruded from light alloy and provided with an anodized or chromate coating.